Table 2A - The Impact of ACES on AB 32 reductions

AB 32			ACES
Category	**Reductions (MMTs) in 2020**	**Details**	**Potential ACES increase/decrease in GHG reductions?**
LDV GhG Standards	31.7	Pavley Standards	no impact
		Develop Pavley II LDV standards	no impact
Energy Efficiency	26.3	Building/appliance efficiency	Improvement due to DOE appliance standards, money from ACES for efficiency
		Comb. Heat and power +30K GWh	
		Solar Water Heating (AB 1470)	
Renewables Portfolio Standard	21.3	30% by 2020	
Low Carbon Fuel Standard	15		*Indirect land use prohibition at the federal level may hinder achieving reductions vs. "fuel shuffling"*
Regional Transport.-related GHG targets	5		
Vehicle Efficiency measures	4.5		
Goods Movement	3.7	Ship electrification	*benefits from confirmation of US EPA authority to regulate GHG from new heavy duty vehicles, locomotives, marine vessels*
		Efficiency improvements	
Million Solar Roofs	2.1		
Medium/Heavy duty vehicles	1.4	HDV GHG reduction - aerodynamics	*no authority provided to regulate in-use HDVs*
		M/HDV hybrid	
High Speed Rail	1		
Industrial (under cap and trade)	0.3	Refinery	
		EE and Co-benefits audits	
Additional need	**34.4**		Decrease of 34.4 due to moratorium
High GWP gas measures	20.2		
Sustainable Forests	5		
Industrial (not under cap)	1.1	Oil/gas extraction and transmission	
Recycling and Waste	1	landfill methane capture	

Current Scoping Plan Total	174
Decrease from ACES	-34.4
Quantifiable Increase due to ACES money for energy efficiency from 2012-2020 [1]	7.3
TOTAL Estimated GHG Reductions with AB32 and ACES (2020)	**146.9**

GHG Reduction Shortfall	27.1			
Additional ACES Allocation Money available for GHG Reductions from 2012-2020:	$4,513,911,915	To recoup shortfall of GHG reductions using ACES money, CA will have to reduce from 2012-2020 at the rate of [2]:	$166	per ton CO2e, permanent reductions

Notes:

1 This number is from electric utility data, giving us a conversion factor of tons CO2e/$. For other allocations in ACES, this conversion factor is not easily attainable OR the sector is too broad to give specific estimates.

2 For the allocations to CA or LDCs within CA which we cannot specifically identify a conversion factor of CO2e reduced/$, we instead give the maximum feasible price per ton to achieve AB32 targets using ACES allowance revenues.

TABLE 2B - ACES Funding for AB32 Categories

AB 32				
Category	**Projected Reductions (MMTs)**	**Details**	**ACES funds supplement AB32 measures: high-low ($ tbd by our analysis)**	**ACES Funding mechanism**
LDV GhG Standards	31.7	Pavley Standards		*Cannot use SEED Funds for transportation efficiency*
		Develop Pavley II LDV standards		*Cannot use SEED Funds for transportation efficiency; vehicle electrification funding could contribute especially over longer-term of Pavley II standard*
Energy Efficiency	26.3	Building/appliance efficiency		SEED Funds, 32% allowances to utilities through 2025
		Comb. Heat and power +30K GWh		
		Solar Water Heating (AB 1470)		
Renewables Portfolio Standard	21.3	30% by 2020		SEED Funds, 32% allowances to utilities through 2025
Low Carbon Fuel Standard	15			
Regional Transport.-related GHG targets	5			*Cannot use SEED Funds to meet this goal except 10% of SEED funding could be used for mass transit capital spending*
Vehicle Efficiency measures	4.5			*Cannot use SEED Funds for transportation efficiency to meet this goal*
Goods Movement	3.7	Ship electrification		Cannot use SEED Funds for transportation efficiency to meet this goal
		Efficiency improvements		
Million Solar Roofs	2.1			SEED Funds
Medium/Heavy duty vehicles	1.4	HDV GHG reduction - aerodynamics		Cannot use SEED Funds for transportation efficiency to meet this goal
		M/HDV hybrid		Cannot use SEED Funds for transportation efficiency to meet this goal
High Speed Rail	1			Cannot use SEED Funds to meet this goal except 10% of SEED funding could be used for mass transit capital spending and include high speed rail

Industrial (under cap and trade)	0.3	Refinery		2% allowances to refiners but no requirement to use for emission reductions; SEED funds could be applied in part to industrial customers
		EE and Co-benefits audits		
Additional need	**34.4**			
High GWP gas measures	20.2			
Sustainable Forests	**5**			domestic adaptation 2012-21 2%
Industrial (not under cap)	1.1	Oil/gas extraction and transmission		
Recycling and Waste	1	landfill methane capture		SEED Funds
State Gov't ops	TBD			SEED Funds
Local gov't ops	TBD			SEED Funds
Green buildings	26			only for EE
Recycling and Waste	9	mandatory comm. Recycling		
		other		